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10/758,752	01/15/2004	Ismail Emesh	004.0088	6415
29906	7590	10/03/2006	EXAMINER	
INGRASSIA FISHER & LORENZ, P.C. 7150 E. CAMELBACK, STE. 325 SCOTTSDALE, AZ 85251			WILKINS III, HARRY D	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/758,752

**Applicant(s)**

EMESH, ISMAIL

**Examiner**

Harry D. Wilkins, III

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Interpretation***

1. The recitations in claim 1 of "at least one contact *separate* from said platen assembly and said carrier" and in claim 40 of "at least one contact supported *independently* from the platen assembly and carrier "(emphasis added in each) requires some amount of interpretation to determine its exact scope since Applicant failed to recite an express definition. "Separate" and "independently" in this context are interpreted to mean "not attached to". This interpretation is based on the specification as filed, for example figures 18-30. As the Examiner understands the presently claimed invention, paragraphs 80-93 describe the "separate" or "independent" electrical contacts. The embodiments described by Applicant in figures 9-10 and 12-17 are deemed to be specifically excluded since they require electric contacts embedded within the platen assembly, and thus, not "separate" or "independent".

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the spring element, e.g.- spring 1638, for biasing the pivot arm towards the workpiece. Without the spring element, the pivot arm would not become biased towards the workpiece and thus, would not operate with solid electrical contact to the workpiece.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 19-25 and 39-41 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ashjaee et al (US 2001/0035354).

Ashjaee et al anticipate the apparatus as claimed. Ashjaee et al teach (see figures 16-17 and paragraphs 56-57) an apparatus comprising a platen assembly 9 including a support platen, a conductive layer and an electrolyte distribution plate (see figure 3 and paragraphs 10-11), a carrier configured to carry the workpiece, a reservoir for delivering electrolyte to the distribution plate and multiple contacts separate from the carrier and the platen assembly for engaging a peripheral region of the workpiece.

Regarding claim 19, Ashjaee et al teach (see figure 22) making the platen assembly in a rectangular shape.

Regarding claims 22-23, Ashjaee et al teach (see paragraphs 56-57) attaching a rotary motor to rotate and oscillate the carrier and another motor to the platen assembly to impart motion to the platen assembly.

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Regarding claims 39 and 40, the electric contacts (603) of Ashjaee et al are shown to be independently supported in figure 17. Such support would have inherently been considered a rigid structure.

6. Claims 1, 19-23, 31-35 and 39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Basol et al (US 2002/0053516).

Basol et al anticipate the apparatus as claimed. Basol et al teach (see figures 3-10B) an apparatus including a platen assembly that included a conductive layer, a support and an electrolyte distribution plate, a carrier configured to carry the workpiece, a reservoir for delivering electrolyte to the distribution plate and multiple contacts for engaging a peripheral region of the workpiece separate from the platen assembly and the carrier. The contacts were supported independent of the platen assembly and carrier head, and contact rails were also contemplated (see figures 9A and 9B).

7. Claims 29-30 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Basol et al (US 2002/0079230).

Basol et al anticipate the apparatus as claimed. Basol et al teach (see figures 3-5, 8A and 8B) a platen assembly that included a support plate 114, an electrolyte distribution plate 114a and a conductive layer between the two which included a plurality of concentric segments (115a and 115b) configured for coupling to respective different potentials.

8. Claims 1, 19-23 and 39 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Basol et al (US 2002/0121445).

Basol et al anticipate the apparatus as claimed. Basol et al teach (see figures 5C, 6A and 6B) an apparatus including a platen assembly that included a conductive layer (anode 116), a support platen (118) and an electrolyte distribution plate (206), a carrier (106), a reservoir for delivering electrolyte to the distribution plate and multiple contacts supported separately from the platen assembly and the carrier.

9. Claims 1, 19-23, 31-35 and 39 rejected under 35 U.S.C. 102(e) as being clearly anticipated by Basol et al (US 2003/0089598).

Basol et al anticipate the apparatus as claimed. Basol et al teach (see figures 1-3 and 10A-13B) an apparatus including a platen assembly that included a conductive layer, a support and an electrolyte distribution plate, a carrier configured to carry the workpiece, a reservoir for delivering electrolyte to the distribution plate and multiple contacts for engaging a peripheral region of the workpiece separate from the platen assembly and the carrier. The contacts were supported independent of the platen assembly and carrier head, and contact rails were also contemplated (see figures 10A and 10B).

10. Claims 1, 19-23 and 39 rejected under 35 U.S.C. 102(e) as being clearly anticipated by Basol et al (US 2002/0134748).

Basol et al anticipate the apparatus as claimed. Basol et al teach (see figures 2A-6) an apparatus including a platen assembly that included a conductive layer, a support and an electrolyte distribution plate, a carrier configured to carry the workpiece, a reservoir for delivering electrolyte to the distribution plate and multiple contacts for

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engaging a peripheral region of the workpiece separate from the platen assembly and the carrier.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashjaee et al (US 2001/0035354).

Ashjaee et al fail to teach that the platen assembly included at least one opening in the platen assembly through which the contacts engaged the workpiece.

However, Ashjaee et al teach (see paragraph 63) that differently shaped contact and/or anode plate assemblies (i.e.-platen assembly) were contemplated, such that the shape of the assembly was considered to be a known result effective variable.

Therefore, absent evidence of an unexpected result, it would have been obvious to one of ordinary skill in the art to have adapted the shape of the platen assembly of

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Ashjaee et al to have included cutouts or holes through which the contacts extended because Ashjaee et al teach that the shape of the platen assembly was known to be result effective.

14. Claims 5-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashjaee et al (US 2001/0035354) in view of Dickerson (US 5,178,546).

Ashjaee et al fail to teach that the contacts included a pivot mount, a pivot arm and a contact element engaging the workpiece and a spring for biasing the contact element towards the workpiece. Ashjaee et al teach using a contact element and a spring, but not a pivot mount and a pivot arm as claimed.

Dickerson teaches (see claim 1 and figures) a device for providing sliding electrical contact between two surfaces which included a pivot mount, a pivot arm, an electrical contact element (ball) and a spring for biasing the pivot arm towards the surface to be contacted. The arrangement provided constant electrical contact between two slidably engaged portions.

Therefore, it would have been obvious to one of ordinary skill in the art to have substituted the pivoting electrical contact of Dickerson for the contact element of Ashjaee et al because the pivoting contact of Dickerson allowed for continuous but slidable contact between two portions of an apparatus.

15. Claim 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashjaee et al (US 2001/0035354) in view of Basol et al (US 2002/0079230).

Ashjaee et al fail to teach a segmented electrode layer, each coupled to different, but similar potentials.



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Basol et al teach (see figure 3-5, 8A and 8B) a platen assembly that included a support plate 114, an electrolyte distribution plate 114a and a conductive layer between the two which included a plurality of concentric segments (115a and 115b) configured for coupling to respective different potentials. The different potentials applied aided (see abstract) in increasing uniformity during deposition.

Therefore, it would have been obvious to one of ordinary skill in the art to have formed the conductive layer of Ashjaee et al in a plurality of concentric segments as taught by Basol et al in order to increase the uniformity of the processing of the workpiece surface.

16. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ashjaee et al (US 2001/0035354) in view of Basol et al (US 2002/0134748).

Ashjaee et al fail to teach utilizing an optical endpoint detection probe configured to monitor the workpiece.

Basol et al '748 teach (see abstract and figure 3) using an optical endpoint detection probe to monitor the workpiece and determine the end point of processing.

Therefore, it would have been obvious to one of ordinary skill in the art to have added an optical endpoint detection probe as taught by Basol et al to the apparatus of Ashjaee et al for the purpose of determining the end point of the electrolytic processing.

17. Claims 24-25, 36-37 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basol et al (US 2002/0053516) OR Basol et al (US 2002/0121445) OR Basol et al (US 2003/0089598) in view of Ashjaee et al (US 2001/0035354).

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Each Basol et al references fails to teach a second motion generator coupled to the platen assembly.

Ashjaee et al teach (see paragraph 63) that in addition to movement of the wafer carrier, movement of the platen assembly was known in order to effect proper processing operations.

Therefore, it would have been obvious to one of ordinary skill in the art to have added a second motion generator coupled to the platen assembly as taught by Ashjaee et al because it was known in the art that optimum processing conditions required movement of both the carrier and the platen.

18. Claims 26 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basol et al (US 2002/0053516) OR Basol et al (US 2002/0121445) OR Basol et al (US 2003/0089598) in view of Ashjaee et al (US 2001/0035354) as applied above to claims 24-25 and further in view of Basol et al (US 2002/0134748).

Each Basol et al reference fails to teach utilizing an optical endpoint detection probe configured to monitor the workpiece.

Basol et al '748 teach (see abstract and figure 3) using an optical endpoint detection probe to monitor the workpiece and determine the end point of processing.

Therefore, it would have been obvious to one of ordinary skill in the art to have added an optical endpoint detection probe as taught by Basol et al '748 for the purpose of determining the end point of the electrolytic processing.

19. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basol et al (US 2002/0134748) in view of Ashjaee et al (US 2001/0035354).

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Basol et al fail to teach a second motion generator coupled to the platen assembly.

Ashjaee et al teach (see paragraph 63) that in addition to movement of the wafer carrier, movement of the platen assembly was known in order to effect proper processing operations.

Therefore, it would have been obvious to one of ordinary skill in the art to have added a second motion generator coupled to the platen assembly as taught by Ashjaee et al because it was known in the art that optimum processing conditions required movement of both the carrier and the platen.

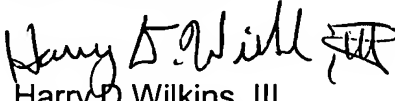
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Harry D Wilkins, III  
Primary Examiner  
Art Unit 1742

hdw